**Inception Report**

**Strengthening Environmental Data Gaps in Somalia**

**Government of Somalia (SNBS) & UNDP Somalia**

**“Project: PIP Strategic Planning in Somalia”**

**OUTLINE AND WORK PLAN**

International Technical Lead Consultant, Dr. Anand Babu Prakasam

National Technical Lead Consultant, MR Aweys Yusuf

24 May 2022

This document presents the proposed outline and methodology for strengthening data gaps in environment natural resources, climate change and aligned sectors in Somalia. The approach consists of systematic framework that marks the scope of environment statistics; (ii) facilitates a synthesized presentation of data from various subject areas and sources; (iii) simplifies the complexity of the environment appropriately so that it can be measured more easily; (iv) helps to identify the range of statistics relevant to societal decision-making regarding the environment; (v) is consistent with statistical frameworks already used in other domains to facilitate the integration of environment statistics; and (vi) is conceptually based. A detailed work-plan is also outlined.

1. **CONTEXT AND BACKGROUND**

The demand for environment statistics is increasing in conjunction with continuing environmental degradation and the challenges associated with improved environmental management. It is well recognised that human well-being depends on the environment as there is growing list of environmental issues in countries on which decisions must be taken, such as environment vulnerabilities, climate change, biodiversity loss and natural resource management. Given there is extensive need for national governments, businesses, households and other decision makers to deal effectively with the environmental challenges and issues, the environment statistics informing them should be of highest quality possible.

Somalia is a fragile state that is very vulnerable with turbulent political history. Some state departments were recently established under the new stable government. According to the National Capacity Self- Assessment (NCSA), many ministries has very limited experience and operational capacities. The Government has limited capacities to develop policies, enforce them and manage public expenditure. The National Development Plan states that many economic sector seriously lack “weak institutional capacity, lack of central coordination, enforcement of regulations, codes and standards and limited qualified human resources.” Further, due to lack of personnel trained in environment/natural resources data analysis, local institutions currently lack the capacities to produce environmental sustainable-informed plans that are specific to their regions.

Recent national governments are making important efforts to improve social and macroeconomic stability, with substantial international support aiming to rebuild institutions. But still, current planning by national institutions are focusing only on short-term needs, and budgets are used to address humanitarian issues such as the recent drought, rather than towards longer-term actions. To move towards informed decision-making for long-term needs, Somalia government institutions need useable and targeted risk predictions, and the capacities to use data in future planning. Somalia is now at a critical juncture where knowledge and practical experience (such as from the updated data and information) must be utilised for development planning for the long-term. Institutions from federal down to local levels must be trained on how to establish adequate resources for development-related mandates (environment natural resources and climate disaster). **Well capacitated technical knowledge to produce data-informed planning/plans would help decision-makers at all levels support vulnerable populations in the event of climate / weather shocks.**

**Environment data:** Environment statistics provide information about the state and changes of environmental conditions, the quality and availability of environmental resources, the impact of human activities and natural events on the environment and the impact of changing environmental conditions. They also provide information about the social actions and economic measures that societies take to avoid or mitigate these impacts and to restore and maintain the capacity of the environment to provide the services that are essential for life and human well-being.

Environmental challenges in Somalia are many and complex in nature. Environmental concerns such as the degradation of rangeland or soil erosion on farmland affect the poor because they rely heavily on natural resources, such as firewood for their livelihoods and are more likely to be affected by extreme weather events. further, declining soil fertility for example leads to smaller crops and deterioration of water reduces the fish catch. Shortages of firewood may lead people to eat lower-nutrition foods that need less fuel for cooking. Recurrent droughts also result in loss of harvest crops and can contribute to malnutrition. Without basic services systems such as clean water, many poor people rely on the use of polluted water and have no appropriate means to dispose of waste. Pollution and waste management are becoming major concerns in urban areas and environment hazards such as floods and especially droughts are becoming more frequent and disastrous. Environmental degradation is visible all over Somalia and impacts the food security and livelihood situation of the people. The Somali people are feeling the impact of environmental problems already and climate change will only exacerbate them over time.



The Federal government jointly with international community is making tangible step forward towards addressing Somalia‘s environmental needs and commits to taking action and setting up legal and regulatory frameworks to ensure sustainable environmental and natural resource management, including collating and making availability of updated data and databases on environment natural resources, climate and disaster vulnerabilities, productive sectors (agriculture, livestock and fisheries) as well as water and forestry. This efforts by national government will help to reduce poverty, strengthen Somaliland‘s economy and create employment.

**Data standards and quality:** Timely, coordinated, quality and representative data is indispensable approach in formulating and designing national environment policies and plans. Data sharing on environmental and climate change research and technology is low and needs to be strengthened. Environment data covers a wide range of information and are multi- and inter-disciplinary in nature. They originate from a variety of institutions that collect data and, similarly, numerous methods are used to compile them. The field of environment statistics requires an appropriate framework to guide its development, coordination and organization.

The current data available for the environment sector is very limited and mainly relies on the work of government institutions, development partners, NGOs and the private sector. Usually, government institutions in this sector collect limited administrative data on a regular basis. Development partners with this sector also collected some primary data. Despite that, there are huge data gaps that directly impact the work and plan of the sector. Many indicators in the sector RBM don’t have baseline data. In some cases, although data is available the frequency that it is collected is not ideal. Moreover, dissemination and use of the existing data is another obstacle. Oftentimes stakeholders do not share the data they are collecting and valuable information is not used for planning and policymaking. The bellow table summarizes, environment sector required data, source, current status and the possible intervention.

**Data sharing protocols are needed to catalyze the sharing of data and information among official government bodies and non-state stakeholders, in particular at the grassroots level, private sector, NGOs, as well as across development sectors.**

Moreover, country-driven capacities needs to be built to provide relevant environment data to ministries and local districts to inform decision-making. Concomitant efforts are required for expansion of the environmental monitoring network, the development of an open data portal for Somali environment data to promote knowledge sharing among various actors, and the strengthening of efforts to produce and disseminate targeted forecast information related to the environment natural resources and climate-related hazards

In this line, the creation of the National Statistics Bureau and passage of the National Statistics Bill has created an institutional framework for a more centralized and formal generation of statistical data in Somalia. Improving environmental statistic will provide better information about developments and support policy making, and also support efforts to enhance transparency and environmental governance.

1. **METHODOLOGY**

The methodology developed for arriving at strengthening environmental data gaps in Somalia (SNBS) will consist of several steps, outlined below in details: duties and responsibilities of consultants, desk work analysis, collating and review of data-related information on various environmental themes, virtual meetings & consultations with national institutions and government entities, training workshops conducted as organized by UNDP country team in close collaboration with the SNBS staff.

The strengthening of environment data gaps under this assignment would be ensured through the use of different methods such as semi-structured interviews with national government technical staff, policy officers in the ministries and respective departments, key informant interviews with leading environment experts in the country, and also conducting participatory consultations with wide range of stakeholders, civil society, local government, community members, academia, donor groups, international organizations Stakeholder workshop with seven states and partners present in the country and other professionals.

**Duties and responsibilities of Technical Consultants**

The technical consultants (international and national) will apply their specialized knowledge of the objectives, requirements and processes of strengthening environment data gaps in environment sector of Somalia and provide technical experience in assessing the status and quality of environmental statistics and their needs for long-term development planning. Towards this scope, the Consultants will carry-out strong analytical works for developing functional environment indicator databases. The specialist will be simultaneously working with various departments and units within the Somalia Statistical Bureau (SNBS). The consultants will also focus on capacity building and transfer of knowledge on new environment databases to different units at the SNBS and various other ministries/departments. This assignment will be undertaken for the period of five months both home based and virtual consultations for specified number of days with detailed mission plan to the targeted countries.

Working under the leadership of the SNBS and UNDP CO focal points; and collaborating closely with all its relevant national Govt. entities and its institutions, partners, civil society, and relevant organizations/stakeholders, this assignment consultants is expected to strengthen environment data gaps in environment sector and its related sectors through the following tasks:

* Provide thorough knowledge of or demonstrated professional experience in analysing data to extract relevant knowledge such as key environment indicators, trend assessments etc. This includes use of environment data intelligence tools, data assimilation,  in-depth statistical analysis of data, geospatial analysis using GIS and data visualisation such as interactive graphs, maps or dashboards.
* Provide demonstratable data and information management skillsof environmental and/or climate data and information. This can be either from within a specific thematic area (e.g. waste water, air pollution, disasters, climate change), or from different sources such as in situ observation networks, remote sensing, geospatial data, citizen science and Internet of Things, provided in different formats (e.g. unstructured and structured data, tabular, raster, vector). This includes  data quality control and quality assurance methods.
* Guide the development of data on environment attributes with an database inventory; using national and official sources by reviewing the country-specific statistical tables of environment-related indicators and undergo a tracking exercise pinpointing the data availability of these indicators at the country level.
* Collaborate and closely work with SNBS, Environment Ministry and other Statistical Agencies on data storage, data/information sharing and maintenance of environment related data;
* Build capacity among key government staff to collate and validate environment data and information; and enhance understanding amongst national stakeholders on the use of data to understand environment related issues and to inform effective planning;
* Support national technical staff and policy officers to access and use environmental datasets for use in environment-related reports and policy documents, including in reporting against the Sustainable Development Goals (SDGs) and Multilateral Environmental Agreements (MEAs);
* Publicise the national Environment Data Portal to extend its user base and to help users of its data to maximise their skills in data management and its application.

**Outputs and Deliverables:**

* **Outputs:**

1. **Consultations and Key Informants Interviews:**
   * Consultative planning on approach of the work
   * Building up a list of key people and stakeholders for meetings
   * Conducting virtual meetings in Somalia with Federal Ministries, Institutions, CSO, Key Partners, etc
2. **Collecting, Simulation and Computation of Environment Related Data:**
   * Collecting data from primary, secondary and third party sources including international open source databases
   * Data analytics – simulations and computations
   * Forming databases with set of indicators
3. **Technical Capacity Building Activities** 
   * Preparing presentations for technical workshop
   * Conducting hands-on training on environment data for technical staff and policy/planning officers of key ministries and institutions
4. **Data Manual Documentation Report:**

* Draft final manual documenting process of updating the environment database and addressing methodological differences across datasets
* Drafting brief guideline note
* **Deliverables:**

The total consultancy duration for this assignment is for 50 days spreaded across 4.5 months with specific deliverable outputs. The key deliverables by the consultant during different stages of this assignment are as follows:

* Inception Report (within 3 weeks)
* Draft Data Manual Documentation Report (within 4 Months)
* Final Data Documentation Report (within 4.5 Months)

final manual documenting process

**Review of literature and key internal documents**

The following literature will be reviewed by the Consultants during the course of this assignment:

* Principle documents such as national government growth and development strategy document; national governments environment documents submitted to multilateral agreements, UNFCCC; national governments’ SDGs publications; UNEP and other UN Agencies country programme documents; any national environment data guidelines; practical guidebooks that are published; civil society publications; and other internal documents provided by relevant ministries in Somalia.
* Environment statistics synthesize data originating from various types of sources. Thus, the data used to produce environment statistics are not only compiled by different collection techniques, but also by various institutions. Types of sources include:
  + statistical surveys (e.g., censuses or sample surveys of population, housing, agriculture, enterprises, households, employment, and different aspects of environment management);
  + administrative records of government and non-government agencies responsible for natural resources, as well as other ministries and authorities;
  + remote sensing and thematic mapping (e.g., satellite imaging and mapping of land use and land cover, water bodies or forest cover);
  + monitoring systems (e.g., field-monitoring stations for water quality, air pollution or climate);
  + scientific research and special projects undertaken to fulfil domestic or international demand.
* Key relevant policies, strategies, plans, acts and legislations currently in place in the Somalia on environment, natural resources, CC, and other relevant environment data frameworks;
* National Governments’ Statistics databases
* International Organisations Environment Statistic Reports (World Bank, IMF, AfDB, UNEP UN Statistics, Africa Regional Databases, African University Open Source Databases)
* International reports and publications, peer-reviewed journal articles, research case studies, papers and briefs, socio-economic assessments, tools, and other relevant literature on Environment Sustainability, natural resources, CC, etc in the context of Somalia and Africa.

**Meetings and consultations**

1. **Individual meetings**

The data strengthening process in Somalia would first and foremost would be based on the individual-level consultative meetings with all national govt. entities, partners and number of stakeholders and country-based actors engaged on environment issues and climate resilient development including:

* Govt. Ministries: Office of Prime Minister, Environment & Natural Resources, Finance & Economic Planning, Trade & Industry, Agriculture, Livestock, Lands and Forestry, Gender, Infrastructure, Rural/Local Government, Water & Irrigation, Environment Research and Disaster Preparedness Authority + respective departments, parastatals, etc
* Civil society: NGOs, INGOs, FBOs, CBOs, Women Groups
* Private Sector: Industry, Business Groups, Companies, Pvt. Sector Unions
* Donor agencies: DFID, USAID, EU, JICA, World Bank, AfDB, and other Bilateral & Multilateral agencies present in the country
* Academics: National Universities, Vocational Institutions
* International and National Research organisations: CIMMYT, ICRISAT, CIAT, ILRI, IITA, NEPAD, NERAD, OXFAM, and other environment organisations
* UN Agencies: UNDP, UNEP, UNOCHA, UNIDO, FAO (SWALIM), WFP, UNICEF, ILO other UN Agencies

1. **Consultations with environment technical staff, policy and planning officers, national environment experts, key stakeholders in environment management and climate resilient development works.**

Extensive consultations were needed to carry-out with staff of the government entities, partners, experts, researchers, key informants, and all the relevant stakeholders generating national policy dialogue and think shop which is mainly aiming to:

1. Understand the historical data on environment, climate change, disasters, etc in the context Somalia both from the developmental, institutional and policy contexts.
2. Documentation of environment data information from past and present baselines, surveys and other primary and third-party sources.
3. Receiving suggestions for strategic direction in designing effective environment statistical data portal frameworks for Somalia for the next 10-15 years taking into consideration of the Risks, Challenges and Opportunities
4. Priorities identified for the proposed green growth entry points and the way forward suggestions.

**Capacity building workshops**

Two or three technical workshops will be conducted for technical staff and policy & planning officers to get a first-hand understanding of the new environment databases created based on this assignment that could be used for effective planning and policy purposes.

These events at national level in particular will help seek increase stakeholders’ perceptions of environment data in the context of new environmental challenges, climate vulnerabilities-risks-impacts.

1. **WORKPLAN**

|  |  |  |
| --- | --- | --- |
| **Period** | **Date** | **Activities** |
| Month 0  (May) | 10/05 to 31/05 | Google Download, Collect, Review of literature and key documents on environmental data in Somalia Context and Country Specific (home-based desk-review) |
|  | | |
| Month 1  (June) | Week 1 | Virtual Meetings with SNBS Team and the Technical Staff on approach/methodology of work  Virtual Meetings with UNDP Country Staff  Developing a list of key experts, specialists and stakeholders for conducting virtual meetings to conduct key informant interviews |
| Week 2 | Conducting key informant interviews with stakeholders enlisting comprising of key Govt. Ministries, Departments, Agencies, Partners, Donor & Development Group implementing environment and climate related projects/ programmes, UN agencies, international organisation, civil society, subject matter experts, researchers, communities, and all other relevant stakeholders.  Arranging individual meetings with the key people (enlisting stakeholders above) for discussion on the environment data framework for Somalia. |
| Weeks 3 & 4 | Determine the environment measurable indicators  Collecting relevant country specific environment data from primary (surveys), literature material and secondary data from various offices. And assess any limitation in accessing key information or data. |
|  | | |
| Month 2  (July) | Week 1 & 2 | Building up a database of indicators on environment natural resources, climate change and other related thematic sectors  Data cleaning, computations and analytics |
| Weeks 3 & 4 | Continuing collection of information and data  Data cleaning, simulations, computations and analytics |
|  | | |
| Month 3 (August) | Week 1 | Documentation of the information collected |
| Week 2 | Preparing presentations for capacity building workshops |
| Weeks 3 & 4 | Capacity building workshops for the technical staff, policy & planning officers of relevant ministries and institutions  Continuing Data cleaning, simulations, computations and analytics |
|  | | |
| Month 4 (September) | Week 1 | Continuing capacity building workshops  Continuing Data cleaning, simulations, computations and analytics |
|  | Weeks 2, 3 &4 | Work on databases  Formatting databases |
|  | | |

***Environment Sector’s Data Requirements***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Required data (themes) | subcomponents | Source of data | Status | Required intervention |
| 1 | Environmental Conditions and Quality | * Physical Conditions * Land Cover, Ecosystems and Biodiversity * Environmental Quality | * Monitoring systems * Remote sensing data * Environmental, meteorological, hydrological, geological and geographical authorities or institutions | Available with limited scale | Compilation data |
| 2 | Environmental Resources and their Use | * Mineral Resources * Energy Resources * Land * Soil Resources * Biological Resources * Water Resources | * Statistical surveys * Administrative records * Remote sensing * NSOs * Authorities and institutions such as mining, energy, agriculture, water and forest | Not available | Compilation data |
| 3 | Residuals | * Emissions to Air * Generation and Management of Waste water * Generation and Management of Waste * Release of Chemical Substances | • Statistical surveys • Administrative records • Monitoring systems | Not available | Compilation data |
| 4 | Extreme Events and Disasters | * Natural Extreme Events and Disasters Technological Disasters | * Administrative records * Remote sensing * Emergency and disaster authorities * Seismic, meteorological monitoring and research centres * Industrial complexes that work with hazardous substances and processes * Insurance companies | Not available | Compilation data |
| 5 | Climate change | * GHGs * Daily/monthly temperatures | * Administrative data/ Environmental Surveys | Not available | Compilation data |
| 6 | Pollution | * Air/water pollution | * Administrative data/Environmental Surveys | Not available | Compilation data |
| 7 | Human Settlements and Environmental Health | * Human Settlements Environmental Health | * Statistical surveys * Administrative records * Remote sensing * NSOs * Housing and urban planning and oversight authorities * Cartographic authorities * Transport authorities * For health and administrative records, the health authority | Not available | Compilation data |
| 8 | Forests and woodlands | * Forest area * Deforestation | * Administrative data/Environmental Surveys | Not available | Compilation data |
| 9 | Ecosystems and Biodiversity | * Ecosystems * Species, flora and fauna * Biodiversity | * Administrative data/Environmental Surveys | Not available | Compilation data |
| 10 | Environmental Protection, Management and Engagement | * Environmental Protection and Resource Management Expenditure * Environmental Governance and Regulation * Extreme Event preparedness and Disaster Management * Environmental Information and Awareness | * Statistical surveys * Administrative records * Remote sensing * NSOs * Entity producing government expenditure statistics * Statistical entity in charge of national or sub-national surveys * Environmental authority and other sector authorities | Not available | Compilation data |
| 11 | Alternative sources of energy | * Sources of energy * Alternative energy sources | * Administrative data/Environmental Surveys | Not available | Compilation data |